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8/16/04

Application/Control Number: 09/505,240

Art Unit: 2837

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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the specification, page 7, after line 2 insert the following paragraph:

Exam Andt #1
Fig. 2a is a perspective view of a wall control in accordance with an embodiment of the invention.

Replace the paragraph beginning at page 7, line 8 and ending at page 7, line 11 with the following two paragraphs:

Exam Andt #2
Fig. 6, which is represented herein as Figs. 6A, 6B, 6C and 6D, is a schematic diagram of the electronics controlling the rolling shutter head unit of Fig. 2;

Figs. 7A-C are a flow chart of an overall routine for operating and controlling a movable barrier operator; and

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bentsu Ro whose telephone number is (571) 272-2072. The examiner can normally be reached on Mon-Fri, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Exams
Amdt # 1

→ Fig. 3 is a perspective view of the tubular motor assembly of Fig. 2;

5 Figs. 4 and 5 are two exploded perspective views of
the location of the absolute position detector assembly
shown in Fig. 3;

Fig. 6 is a schematic diagram of the electronics controlling the rolling shutter head unit of Fig. 2;

10 Figs. 7A-7C are a flow/chart of an overall routine for
operating and controlling a movable barrier operator; and

Figs 8A-8C are a flow chart of the timer interrupt routine called in the routine of Fig. 7.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

15 Referring now to the drawings, and especially to
Fig. 1, a movable barrier operator embodying the present
invention is generally shown therein and identified by
reference numeral 10. The movable barrier operator 10 is
employed for controlling the opening and closing of a
20 conventional overhead garage door 12 of a garage 13. The
garage door 12 is mounted on guide rails 14 for movement
between the closed position illustrated in Fig. 1 and an
open or raised position. The garage 13 includes a
ceiling 16 and a wall 18 defining an opening blocked by
25 garage door 12. As shown, guide rails 14 are mounted to
wall 18 and ceiling 16 of the garage 13 in a conventional
manner.

A power drive unit or head, generally indicated at 20, is mounted to the ceiling 16 in a conventional manner. A drive rail 22 extends between the power drive unit 20 and the garage wall 18. As can be seen in Fig. 1, one end of the drive rail 22 is mounted to a portion of the garage wall 18 located above the garage door 12. An operator arm 26 is connected at one end to the garage door 12 and at the other end to a trolley 28